

Conservation Engineering at the NWFSC

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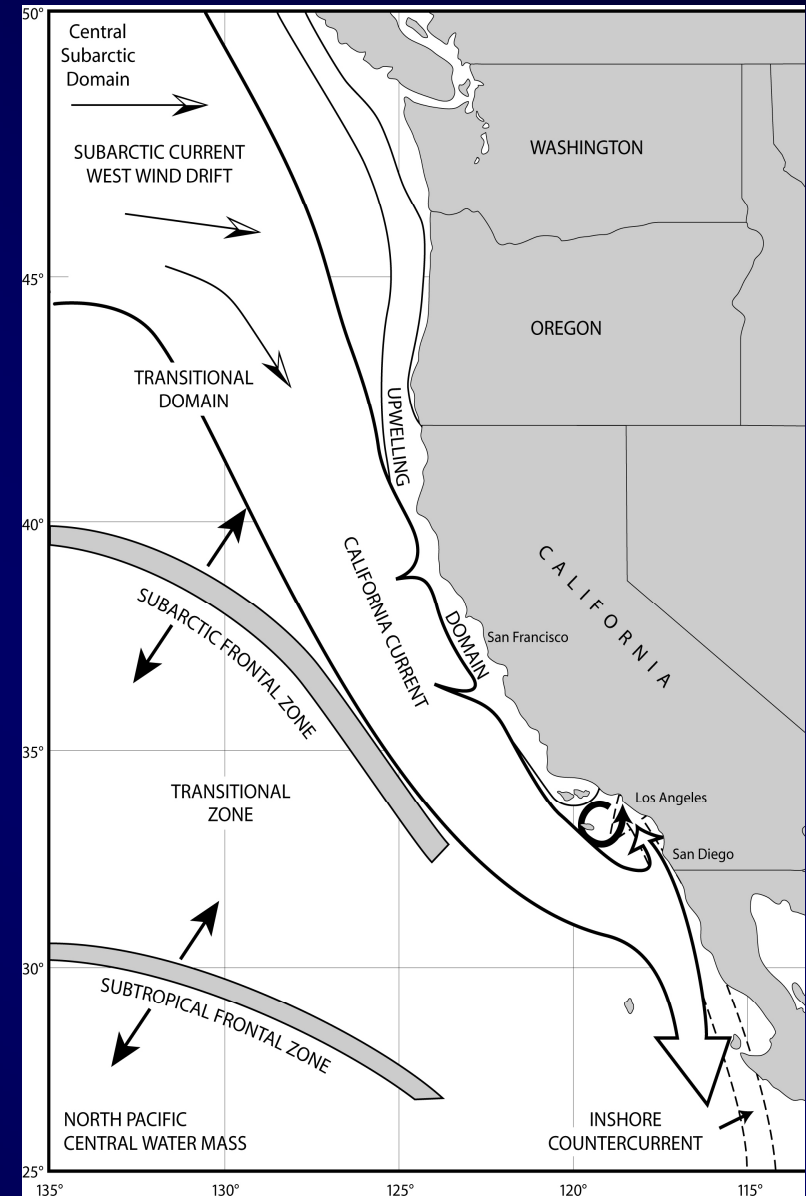


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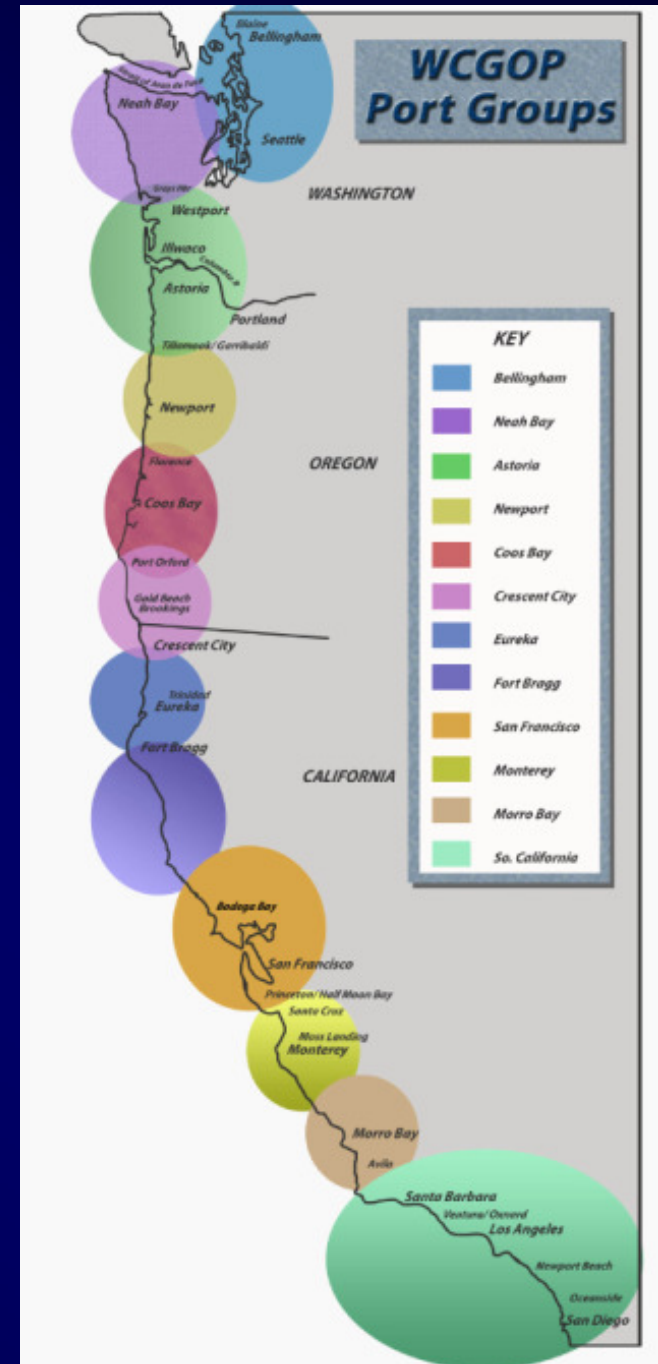
California Current Large Marine Ecosystem

- Two Fisheries Science Centers
- Two NMFS Regions (NW and SW)
- One Fisheries Council: PFMC
- Five FMPs
 - Groundfish (90+ species)
 - Highly Migratory Species (13 species)
Inter-American Tropical Tuna Commission
 - Salmon (large number of ESUs)
 - Coastal Pelagic Species (8 species)
 - Pacific Halibut
International Pacific Halibut Commission
- Protected Resources: Cetaceans, Pinnipeds, Salmon, Seabirds, Green Sturgeon, Eulachon, Sea Turtles, White Abalone



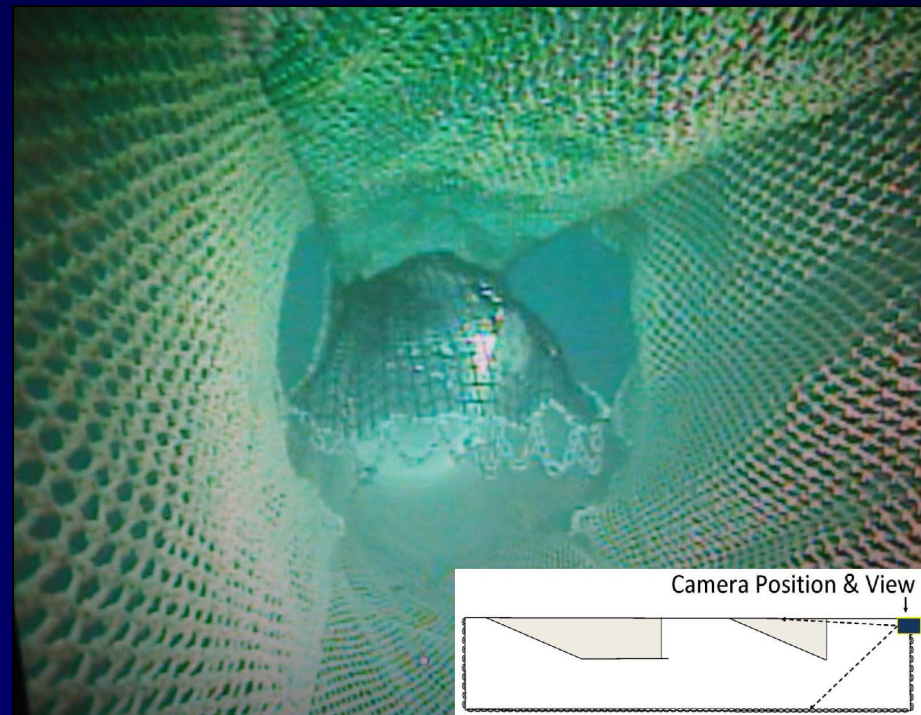
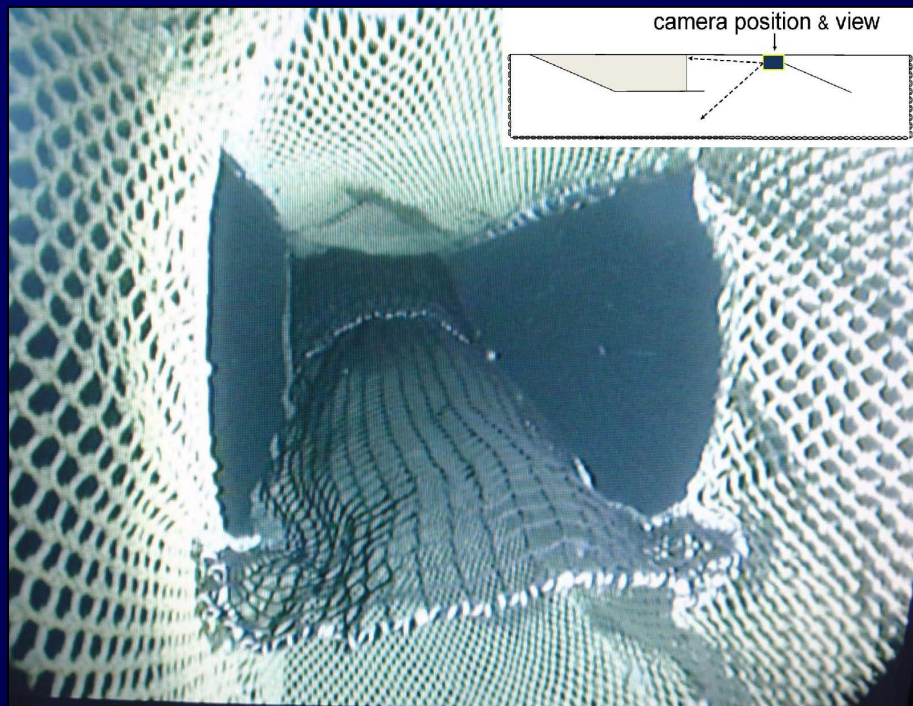
West Coast Groundfish Observer Program

- WCGOP places observers on vessels from Bellingham, WA to San Diego, CA.
- Observers are placed in one of 12 port groups
- Observer program will expand to 100% coverage in 2011 with Individual Quota Management
- Observer's determine the quantity (weight) and the species that are caught but not retained (kept) by the vessel



Current Conservation Engineering Projects

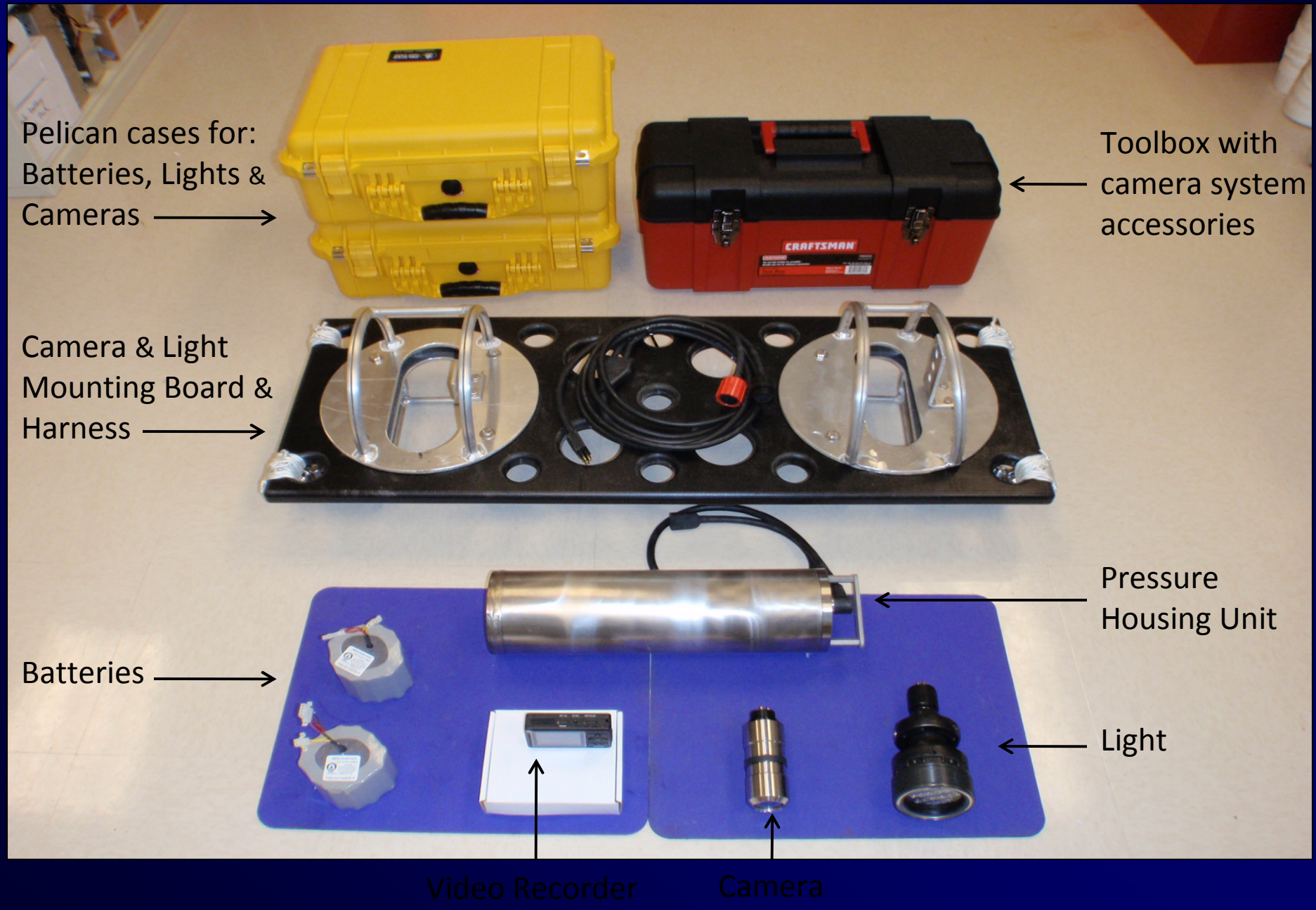
- Applications of DIDSON sonar in mobile gear: foot rope studies and trawl wing studies
- Video assessment of shrimp trawl footrope/seabed interactions w/ NWFSC, testing of “bottom friendly” groundlines that may also lower bycatch – see Bob’s talk on Thursday
- Design and field testing of an open escape window BRD to reduce Chinook salmon and rockfish bycatch in the Pacific whiting fishery
- Providing direct observation video camera systems to fishermen for use in evaluating industry-designed approaches to reducing bycatch and reducing impacts to benthic habitats



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Camera System Components



Collaborations

- Pacific States Marine Fisheries Commission – Mark Lomeli
- Oregon Department of Fish and Wildlife – Bob Hannah et al.
- Alaska Fisheries Science Center – Craig Rose's group in Seattle and Al Stoner's fish behavior group in Newport, OR
- West Coast Fishing Industry – Commercial Fishermen, Net Lofts in Washington and Oregon
- OR Sea Grant Marine Extension
- Oregon State University – Lorenzo Ciannelli

Acknowledgements

- NWFSC Janell Majewski, Patty Burke, Jim Hastie
- West Coast Fishing Industry
- ODFW – Bob Hannah, Keith Matteson, Steve Jones, Matt Blume
- PSMFC – Dave Colpo
- Soundmetrics – Bill Hanot, Ed Belcher
- AFSC – Craig Rose, Scott McEntire, Al Stoner, Cliff Ryer, Rich Titgen
- Grant from NOAA Fisheries “Reducing Bycatch” funds, with cooperation from Pacific States Marine Fisheries Commission

West Coast Groundfish Trawl Fishery



- Operates in coastal communities in California, Oregon, and Washington
- Vessels range in size from 13 to 24 meters
- Multi-species fishery
- Very diverse catch
- Currently managed by two-month cumulative landing limits
- Economically unsustainable due to fleet size, regulatory approach, and status of some stocks.

